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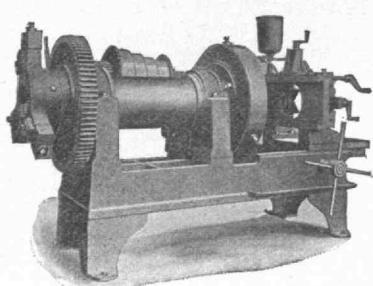
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The Technology Review

VOL. XVIII

MAY, 1916

No. 5

A GREAT REUNION PROMISED

Program of events shows something doing every minute—Celebration will be memorable in many ways—Four thousand former students expected

The great Dedication Reunion is upon us and almost imperceptibly the plans have grown from day to day until the program is almost continuous from Monday morning until Wednesday night.

One new feature of the program is the laying of the corner stone of the Walker Memorial building at two o'clock Monday, June 12. It is a matter of great satisfaction that we can perform this ceremony on such a momentous occasion. Sometimes it looked as though the building could not be begun for some little time, but it is now the expectation that part of it at least can be used some time in the fall for the accommodation of the students. Professor Harry W. Tyler, '84, chairman of the Walker Memorial Committee, will be marshal. A battalion of the M. I. T. cadets, accompanied by a large body of undergraduates, will escort the speakers and the alumni from in front of the new buildings to the site of the Walker Memorial a few hundred feet northeast on the Esplanade. Here Dr. Maclaurin will make the opening address followed by Professor C.-E. A. Winslow, '98, of Yale University, who will make the presentation speech. He will be followed by E. P. Brooks, president of the Junior class, in response. The exercises will not be long and will be over before the beginning of the Basin events which will start at 2.30.

The program of the events in the Charles River Basin, which will be reviewed by the Assistant Secretary of the

Navy, the Honorable Franklin D. Roosevelt, is as follows:

2.30 p.m. Volunteer Patrol Squadron at speed. 2.45 p.m. Sea sled and fast motor boats in action. 3.00 p.m. Burgess-Dunne Hydro-aeroplane flight. Flight by Farnum Fish. 3.30 p.m. Evolutions by Power Squadron of the Boston Yacht Club. 4.00 p.m. Start of Yacht Race. 4.15 p.m. Start of race of M. I. T. Class Crews. 4.30 p.m. Lower Basin. Start of race of Sailing Canoes. Upper Basin. Start of Race of War Canoes. 5.00 p.m. Flight by Farnum Fish in a Wright Biplane. Upper Basin. Start of race of Canoe Fours. 5.20 p.m. Start of race of Canoe Tandems. 5.40 p.m. Start of race of Canoe Singles. Two torpedo boats and one submarine in Basin.

Over the basin will float a great military kite balloon of the very latest pattern furnished through the courtesy of the Goodyear Tire & Rubber Company of Akron, Ohio, of which Paul W. Litchfield, '96, is manager. Arrangements are being made for taking moving pictures from the car of this balloon.

Another very attractive feature will be the exhibition of man-carrying aeroplane war-kites by Samuel F. Perkins, '09. He will illustrate how a United States naval lieutenant was sent into the air from the deck of a war vessel lifted by fifteen kites. This attraction is through the courtesy of John C. Runkle, 88, vice-president of

the Barrett Manufacturing Company of Boston.

The latest program of the Reunion is as follows:

MONDAY, JUNE 12

9.00 a.m. Arrival of the special steamship from New York.

10.50 a.m. Farewell to Rogers. President Maclaurin introduces orator of the day, Mr. James P. Munroe, '82. Music. Seats unoccupied at 10.50 given to first applicant. Time, one hour.

12 m. Fraternity luncheons at the various Chapter Houses.

2.00 p.m. Laying Corner Stone of Walker Memorial. Professor Harry W. Tyler, marshal. March from New Buildings to site of Walker Memorial escorted by M. I. T. Battalion. Address by President Richard C. Maclaurin. Presentation by Professor C.-E. A. Winslow '98, of Yale University. Response by E. P. Brooks, President Junior Class.

2.30 p.m. "Old Home Afternoon." Inspection of New Buildings, and Tea. The Technology Regiment dress parade. Exhibit "Fifty Years of Technology." No charge,—tickets admit you and members of your party. Tickets will not be taken up and can be used for admission to grounds as often as desired. Bring all your friends. (Events on the Basin can be seen from both sides of River and from the Harvard Bridge.) Best route:—Cambridge Subway to Kendall Station.

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5.40 p.m. Start of race of Canoe Singles. Man-carrying kites on Esplanade. Two torpedo boats and one submarine in Basin.

6.00 p.m. Class Dinners. Those at City Club in charge of Committee. Price \$2.00. Classes dining at hotels arrange with their secretaries, and do not send applications to Committee. Admission to City Club up to 8 p.m. by ticket, after 8 p.m. by special badge for Smoker.

7.00-10.30 p.m. Dinner for women at the Copley-Plaza under the auspices of the M. I. T. Women's Association (price, \$2.50), and special entertainment under the same auspices (no charge). An Escort Committee will accompany women to the Cheering of Rogers at 10.30.

8 p.m. Smoker at City Club. Price, \$1.50. Admission by special badge. Governor and State officials invited. Special entertainment in main auditorium. Refreshments. (Coat room will be overworked, advisable to wear hat that can be put in pocket.) At 10.30 undergraduates, with band, escort Alumni to Rogers Building. Singing and cheering Rogers. Decorations and special lighting.

TUESDAY, JUNE 13

10.00 a.m. sharp. Last boat leaves; first boat leaves 9.30 Nantasket Day. Rain or shine. Three steamers. Price, \$3.00. Classes form on beach; guests go to grandstand. Classes march up beach with bands to grandstand. Luncheon. Parade of Mascots. Class Stunts. Large bath-house used for a dressing room for Stunts. If it rains, large pavilion will accommodate entire crowd. Return to Boston about 5.30. See special program distributed on boat.

8.30 p.m. Pageant and Masque, New Buildings. Prices, \$2.00; box holding six, \$30. No rain checks; performance cannot be postponed. (NOTE:—Do not go to Rogers to see the embarkation, as the transportation service will be so crowded that you may not get to New Buildings in time.) After arrival of State Barge and Academic Procession, the audience can greatly assist by being seated as quickly as possible. Illumination, fireworks. Avoid the crowd

on Harvard Bridge by taking Cambridge Subway to Kendall Station, this is important. See synopsis of pageant on page 13 of the Souvenir Program.

WEDNESDAY, JUNE 14

11.00 a.m. Technology Clubs Associated will meet in Room 22, Walker Building. Admission by badge. Delegates from all associations to make report and select next place of meeting.

12 p.m. Departmental Luncheons, Hotel Somerset, Commonwealth Avenue, near Charlesgate East. Price, \$1.50. Departmental heads and prominent Alumni to speak. Buffet Luncheon for women at Riverbank Court, corner Massachusetts Avenue and the Esplanade, Cambridge. Under the auspices of the M. I. T. Women's Association. Price, \$0.50.

2.30 p.m. Dedication Exercises in Great Court, New Buildings. Admission by ticket, no charge. Limitation of admission if weather conditions compel indoor exercises. The Governor of the Commonwealth will be present, attended by his staff, and escorted, in accordance with old Massachusetts custom, by the Lancers. After the entrance of the Academic Procession of guests from other colleges, in scholastic garb, there will be brief addresses by President Maclaurin, Governor McCall, and President Lowell of Harvard, and the address of the day by Henry Cabot Lodge, Senior Senator from Massachusetts.

6.45 p.m. sharp. Banquet, Symphony Hall. Price, \$6.00; balcony seats for women and other guests, \$1.00. Balcony seats wired for telephone. Speaking, marvelous demonstration of transcontinental telephone service, and other features. Please do not block main corridor. Bugle will be sounded for assembly at tables. Please take your place as quickly as possible and remain standing for cheer.

SOUVENIRS

The Sales Committee will take your order for souvenirs and forward them to your hotel or home address. (These may be ordered by mail, also.)

Book containing 14 charming sketches of New Buildings, \$1.50.

Bird's-eye View of entire group as it will appear when completed, done in photogravure, size 30 inches by 19 inches, \$1.50.

Bronze medal commemorating the Fiftieth Anniversary of the opening of the Institute, in case, \$1.50.

Souvenir Program, \$0.50.

Plaque of William B. Rogers, 10 inches in diameter, \$3.00.

Institute seal, 12 inches in diameter, \$3.00.

Technology pennants, various sizes and prices. Photographs of President Rogers, Walker, and Maclaurin. Photographs of all the Reunion events as they occur.

One of the great features of the Reunion will be the very large attendance of women. The program has been laid out with reference to their comfort and entertainment. The committees of the Women's Association have worked most effectively to assist the Reunion Committee and help in rounding out the program and in making the women guests most welcome. The headquarters for the women will be located in the suite occupied by Registration Headquarters in the Copley Plaza.

Returns up to the time of writing this article would indicate that there would be six or seven hundred in attendance at the women's banquet to be held in the Copley Plaza June 12.

The balcony seats at the Alumni Banquet in Symphony Hall will be wired for telephones, and women guests of alumni will have an opportunity of hearing the entire telephonic program.

Please bear in mind that the crowds about the Basin on Monday afternoon and on the evening of the Pageant will be tremendous. All those going to the Pageant on Monday evening should take the Cambridge subway at Park street, getting off the train at Kendall Station, only about eight minutes walk from the new buildings. Harvard Bridge will be very much congested, and indeed the police of Boston and Cambridge hardly know how to handle the situation there. Be sure to go by the subway.

ROLL OF HONOR TO BE PUBLISHED

Names of all donors to the Alumni Fund to be printed in book form by classes—Fund Committee Representatives working hard to make a good showing before July 1

An enthusiastic meeting of the Class Representatives on the Alumni Fund was held at the Engineers Club, May 18, and it was decided to publish a "Roll of Honor," giving the names of all the donors to the Alumni Fund, arranged by classes but without the amount of subscription. The Fund will be closed on July 1, and this is to be published as soon afterwards as possible.

It was unanimously agreed that a special effort should be made to get those who have not contributed to send in a nominal amount so that the numbers contributing may be greatly increased in order to improve the showing of a number of the classes.

It was suggested by some of the younger representatives that since their classmates had made contributions the men had, for the most part, advanced in position and salary, and most of them would undoubtedly be in a position and willing to continue their subscriptions for a period of three years more.

The whole spirit of the meeting was one of the greatest hopefulness and enthusiasm. A strong final effort is to be made to add several hundred thousand dollars to the present subscriptions. Every man who has not contributed anything is to be asked to send at least a minimum amount before July 1. All subscriptions mailed by that date will be counted in the Fund.

A number of the classes have been successful in increasing their class figures very materially. In the class of '93 two members have each agreed to duplicate any subscriptions received up to \$2,500. In other words, a \$2,500 subscription means \$7,500 added to the Fund. This and the other efforts put forth by the class have resulted in a total subscription

from the class of '93 up to date of over a hundred thousand dollars, or a little more than one fifth of the entire Fund. It would appear that the class of '93 would be easily the cup winner unless some other class produces a plan that will beat theirs.

The local representatives of the Fund in the various centers throughout the country are also working hard to make a satisfactory clean-up. The desire on the part of everyone is to have this fund worthy of the Institute and an alumni monument at the dedication of the new buildings.

It is understood that the corner stone of the Walker Memorial will be laid at the time of the Dedication Reunion. The erection of the building will be pushed vigorously throughout the summer, and it is expected that at least a part of it can be used some time in the fall for student purposes.

The Corporation is going ahead with this enterprise, although there is no money to pay for it, and it has never been the policy of the Institute to enter into large obligations of this kind without seeing a way out. They are doing this because of their faith that the alumni will finish the work that they have begun and which is so near their hearts. It is up to us to finish our work properly. Technology men have the reputation of doing things thoroughly and well having once committed themselves.

One of the striking features of the statistics of the fund is the large number of subscribers in some of the classes. This indicates much; for it is the spirit of the gift that counts after all. The class with the largest *esprit de corps* is likely to have the largest number of subscribers even though it may not stand at the head of the list with total subscriptions.

TECHNOLOGY AND THE TIMES

Foundations of Industrial Preparedness rest on teaching such as the Institute gives to its students

Now that the dignified dome and the imposing colonnade of great pillars are in place on the Administration Building of the new Institute of Technology, it will be the lure to many a walk (as soon as the weather becomes decent) across the Charles to take in at close range the beauty and nobility of the whole design. Such is the harmony of the proportions of the architecture, such are the modesty and reserve of its merely ornamental elements, that it requires an actual visit. You must meander on foot about the vast quadrangle, and around the ends of the wings, to appreciate the enormous scale. The real and solid grandeur on which the new housing of "Tech" has been carried out fairly makes everything in the neighborhood look small, even where its neighbors are certainly not to be considered small, or sham or cheap. As years go by, the scale of the whole of Cambridge, not to say Boston itself, will have to be jacked up, so to speak, by some means, in order to be in tune with the key it sets. Only the new Widener Library, bursting the old Harvard Yard and startlingly dwarfing and overwhelming that venerable scene, strikes the same gait. But the Institute has already grown up to this monumental plant, for it is, by the pronouncement of the scientific world, the greatest school of its kind in the world. Speaking of the opportunity for the Institute to pluck fresh triumphs from adversity—the common adversity which no nation escapes of the great war—Dr. Maclaurin recently cited the impartial testimony of "American Men of Science," that, in its staff of professors of chemistry, "the Massachusetts Institute of Technology stands clearly first." There is the prospect that, for a time at least, the competition of Germany will be cut off. The destruction of capital in Europe will give to America the new possi-

bilities of developing industries in other countries with American capital, and this is the exciting outlook for the new Tech.

President Maclaurin shares the view of those who have studied the matter carefully that Germany "has not shown any special genius for chemistry as far as the great advances in that science are concerned," though having a peculiar genius for patient investigation in the application of scientific knowledge to practical ends. We cannot expect at present to establish in this country the complex relationship of science, trade and industry that Germany has built up for herself within the last generation or two. But we have the energy and the capital and the special fields. "We have peculiar advantages with regard to the raw materials required and if we organize our industries with reasonable skill we can place ourselves in a position," President Maclaurin says, "that we should hold without difficulty even when the cessation of hostilities exposes us to the vigorous competition of our rivals." With a staff of eighteen professors in chemistry, more of these men of distinction than in any other institution, and twenty-three instructors and assistants besides, and in the new building more than two acres of floor space devoted to the department of chemistry, the prospect is that the Institute will be able to supply all the chemists and chemical engineers needed both to develop chemical industries in the other countries with American capital and build up great industries in this country. Probably the like optimism is warranted with regard to the other leading departments of the Institute and their possibilities of development.

Is the "tail to wag the dog?" and, if so, which is the dog and which the tail? The alliance with Harvard does not go into effect until the new buildings are

occupied, and some of the provisions of the agreement with the university are still to be passed on by the courts. But already students' and professors' work is being interchanged between the two institutions, especially in civil engineering and electrical engineering. It is after all nothing in the way of change in comparison with the great changes the war has made, and is still to make, in the whole current of the world. The industries of this country face a crisis that must force the organization of our industries on a scientific basis. "When such great forces are operating, it will be disastrous to pay any attention to petty differences between institutions or to the narrow view of any who cannot see beyond the limits of any single institution," says the Institute's President. "In these days of large opportunities our range of vision must be large and the combination of effort of two great institutions should be a powerful aid in training men to meet the responsibilities of the new era that is opening." This is a vision and a promise commensurate with the stupendous scale of the new material plant of the Institute. And yet there is as much more to be done as has been done before even the physical plant is completed. It was a site of twenty-five acres that was talked of when President MacLaurin came to the Institute six years ago. Now the expansion has reached an acreage of double that area, already paid for and in use. By next fall, when the buildings will be occupied, there will be two thousand students on the grounds and something must be done towards providing dormitories for those who cannot get to their homes daily. Here is where the "Walker Memorial" will serve to meet the social needs of the resident community of students and professors. The alumni have always claimed the privilege of finishing that labor of love and the sum now needed is but a small affair compared with what has been given in recent years—including the present to the Institute of a house for its President, which has been pledged by Charles A. Stone and Edwin S. Webster of the class of '88.—*Listener, Boston Transcript.*

Japanese at Tech

The *Register* of the Massachusetts Institute of Technology gives evidence of renewed interest on the part of the Japanese in the higher technical training that the Institute affords, an interest that was emphasized by the recent visit to the school of K. Uchida, ex-governor of Formosa. Some years ago there were quite a number of Japanese among the students, the tally rising to five in 1906, four in some succeeding years and then a year or two without any. The interest has been revived the past year, for no less than seven of the Japanese are now on the lists.

Professor Junjiro Nagazumi was one of the specialists of last season. His home is in Fuoka on the Island Kiushu. The island is the seat of an imperial university in which Mr. Nagazumi is professor. While here he prepared an important thesis and a syllabus of courses of lectures for his home university.

Another man of consequence is Kujiro Nishio of Tokyo. He is one of the department heads of the Japanese Bureau of Mines, a graduate of eighteen years ago of the Mining School of Tokyo Imperial University.

Before coming to M. I. T. Mr. Nishio had spent one semester at Freiburg and one at Vienna in the mining schools, and had made visits to the principal ore beds of the continent. Coming thence to the United States, he investigated numerous ore deposits between the terms of his stay at Tech.

Another of the Japanese now at Technology is Michiya Hiraoka, professor in the Technical High School of Osaka, who with Professor Wakamatsu Yokoyama of Port Arthur is also specializing in mining and metallurgy. Mr. Hada, a native of Shimaneken received his degree from Harvard last year and he is now studying at Tech for the degree of doctor of engineering. Mr. Ito, who comes from Tokyo, a graduate of the Technical College of that city, is specializing in alternating current. Kazu Shogenji is devoting his time to the study of methods of instruction in mechanical engineering.

NEW MARGARET CHENEY ROOM

Description of the handsome quarters to be used for social purposes by women students in the new buildings

While all past and present students of the Institute of Technology share in the enthusiasm and faith which accompanies its preparation for a mighty stride forward, Technology women have their own particular reasons for gratitude. Beneath the great dome, extending across the entire length of the front portico of the central building, facing the great court, is a suite of rooms, gathering into a central headquarters provision for the various needs and functions of Technology women students, Faculty matrons and the Association of Women, the latter an incorporated body of former students.

It is cause for congratulation that although the present Pierce Building will pass into other hands and uses, the Margaret Cheney Room will go across the Charles. What this room has meant to the women studying at Tech, perhaps few outside their own numbers can appreciate. They do not consider it simply a memorial to a former student by a devoted and beneficent parent. In it are centered memories and the spirit of many friends whose hope is to see the best intellectual opportunities offered to women on the same terms as to men. In it have been many important early gatherings of the women now so widely carrying the Tech spirit into the amelioration of the country's living conditions through colleges, secondary schools and homes.

If the material fittings of the present room, the portières woven for it at the great silk mills, its plaster casts, or its pictures and other gifts should not all find a harmonious place in the new room, the important thing is that the spirit of the room itself shall always remain. It is really a symbol for the faith that women will appreciate and give adequate service to society in return for the fairest and most ample intellectual opportunity. Technology women are thankful for the

munificence of the donor and for the wise judgment of the President of the Institute who has chosen to carefully consider the needs of the students.

When it came to a consideration of the division of the space which President Maclaurin has designated for the headquarters for women in the New Tech, a joint committee was formed to make recommendation to the architect.

It consisted of Mrs. Maclaurin, president of the Faculty matrons; Mrs. Harry E. Clifford and Mrs. Harry W. Tyler on behalf of the matrons; Miss Mabel K. Babcock, Miss Susan Minns, and Miss Eleanor Manning, representing the Women's Association of M. I. T. The result is shown in the plan of that part under the great dome which extends the entire length of the front portico and from which there is a wide and extensive view. The rooms are on the third floor and can be reached by stairways at each end, or by elevators. At the western end is the Margaret Cheney Room, which occupies two bays. The finishing of the room, which is for the exclusive use of the women students, will be of a light panelling, and the fittings, chosen to give intimate quality. On the northern wall is a bookcase and on the eastern a space for writing tables. On the other side of the Margaret Cheney Room is the serving room, complete with gas stove, sink, china and linen closets, and near the window a refectory table and benches. Opening out of this room is a large room occupying three bays, which is to be named in honor of Mrs. Emma Rogers, wife of the first President. This will be panelled in walnut tone, with a barrelled ceiling of plaster. On the northern wall are cases for books or objects of art. This room will be available most of the time as an overflow from the Margaret Cheney Room where students who wish to do so may read or

work, but it is specially designed for receptions and teas, given either by the ladies of the Faculty, the Women's Association or the wives of professors.

Another room, occupying one bay, will be the headquarters of the Technology matrons. Eastward from this and extending to the stairway on the other side of the portico are rooms set aside for the women employees, with a kitchenette, a larger room for general use, and, behind the stairs, a rest room. The furnishing of the various rooms will give an opportunity for generosity on the part of the various women who are interested.

Mrs. MacLaurin described these plans at the annual meeting of the Women's Association, when she said in introduction: "Tech in the past has stood for the advancement of science for the good of mankind, and in beginning a new chapter in our history we not only carry forward the same great aim, but we intrench its underlying principles more deeply than ever by working for closer union and coöperation with all forces making for the same end, and we have regard to those forces both within the Institute and without. It is here that I see woman's greatest opportunity—the opportunity of throwing herself wholeheartedly into the broad interests of Technology.

"The Women's Association has already done admirable work; its individual members have made their mark in science, architecture, landscape work, teaching and the like, and as new members are added, new victories will constantly be won. As individuals and as an association you will be specially interested in directing attention to the new openings for women that are constantly presenting themselves, and will do your best to have women students adequately trained for the tasks that they are to undertake."

The Institute of Technology was founded for the purpose of offering advanced instruction in science, opportunity for research and of making a connection between science and the industrial arts. It was opened to students in

1865, the same year as Vassar. Up to 1871 its students were all men, but in January of that year "a frail girl, with steadfast and courageous eyes," brought about a change and after the graduation of Ellen H. (Swallow) Richards no profession or occupation has been closed to a perfectly qualified woman. To perpetuate the memory of the pioneer, the Ellen H. Richards Research Fund of fifteen thousand dollars, largely from the pockets of women alumni and their friends, was established. This provides for a fellowship in sanitary chemistry, which has been held by Mr. Hsu of China for the past two years. Professor John F. Norton has expressed the hope that this fellowship might be held by a woman, when the woman graduate should apply who was thoroughly qualified.

Among the present women students in Tech are graduates from Wellesley, Radcliffe, Smith, the University of Minnesota and Trinity College of Washington. In all, nearly seven hundred women have studied one or more courses at the Institute. Among its graduates are college deans, professors, writers, professional women and many homemakers—their experience is expressed in the message of Miss Marion Talbot, dean of women at Chicago University to the Women's Association. "I am sure the women of the Institute will carry to their new quarters the honest, sincere spirit which is theirs by inheritance and example."—*Boston Herald*.

Meeting at Bridgeport

Thirty-five members of the alumni of the Massachusetts Institute of Technology sat down to a banquet in the University Club rooms last night. Only two of the gathering were from this state, the rest having come from all parts of the country to participate in the supper.

A speech was made by I. W. Litchfield, '85, manager of the Dedication Reunion which will be held in Boston on June 12, 13 and 14, who indicated many things of interest to take place during the event.—*Bridgeport (Conn.) Telegram*, April 12.

THE CROWN OF THE NEW BUILDINGS

Some interesting facts about the dome of the new Technology and a comparison with other celebrated domes

Crowning the central portion of the new buildings of the Massachusetts Institute of Technology is a gigantic dome, one of the unique features of this group of buildings, a piece of architecture that will be recognized as remarkable by anyone who may observe it. The buildings themselves, with their massive construction and classic design, constitute what is in some respects the most wonderful group of university buildings in the world, and the dome is the supreme feature in their design.

Patterned after the famous dome of the Pantheon of ancient Rome, it is molded entirely of concrete of the reinforced, or as it has lately been christened, "armored concrete" style. It has been designed with two large drums, or perpendicular towers, set one within the other, and over the second has been built the spherical cap of the dome. In the centre of this cap is a circular opening, a feature taken directly from the Pantheon but, where that was in the Roman tongue an "eye," and was open through all the seasons of the year, climatic difference will make it necessary to have the opening covered here with a skylight.

The lower drum of the tower part of the work has a framework of large classic columns of concrete placed in two concentric rings 21 feet apart. These are united by a heavy network of concrete beams and braces and the whole is reinforced with steel rods.

This great crown of the Administration Building of the new Technology stands 147 feet above the street level and 65 feet above the parapets. The circular tower of the lower drum is 120 feet in diameter and has a height of 37 feet, the upper drum being 110 feet in diameter and but 18 feet high. The cap, surmounting the whole, is $23\frac{1}{2}$ feet above the upper drum and has a curved radius of $56\frac{1}{2}$ feet.

In comparison with other great domes of the world this new dome at Tech

stands well among the first. It is the largest dome in New England and one of the largest concrete domes in the world, the dome of the Pantheon at Rome built on the same principle being but 42 feet wider. It is not quite so large as the domes of the cathedral at Florence, as St. Peter's at Rome or the tomb of Mahmud at Bijapur, neither can it compare with any of the world's greater elliptical domes, but it surpasses the dome on St. Sophia at Constantinople by 15 feet, is larger than the dome of St. Paul's at London and in size the dome of the Capitol at Washington cannot compare with it at all.

One of the most famous domes of America is that of the Mormon Tabernacle at Salt Lake City, which is constructed entirely of wood, measures over 200 feet in length and 100 in width and is supported at its outer edge on forty-six sandstone columns, but this is an elliptical design. The greatest wonder of this vault lies in the fact that it was designed and built by Brigham Young, who was not an architect and had no training in that line and yet until recently, when the Grand Central terminal in New York was completed, it stood supreme in this kind of construction, a self-supporting dome.

It would be no exaggeration to state that, were the State Capitol of Massachusetts placed within the Administration Building at Tech and suspended, ceiling to ceiling, the dome would be lost within the great interior of the newer structure. The cupola on the top would pierce the Roman "eye" but there would be approximately ten feet to spare at the base of the building. And were the dome of the Christian Science Church placed within it it could not begin to fill the newer concrete crown, although it would more nearly conform to the outline than does the Capitol dome.

All the buildings of the group will converge to the central or Administration

Building as the spokes of a wheel to the hub. Not only will this be true of the buildings as they would look from above but to the eye of one standing across the Charles on the Boston side the conformity of the architecture is apparent, for the buildings rise from three stories at the front of the grounds to four, and then the much taller Administration Building and finally, again, to the dome, the hub of everything.

Pictures of the early work on the dome give an idea of the immensity of the construction and the amount of the necessary work preliminary to the pouring of the concrete. Thousands of feet of lumber were used to make the great forms and molds into which the cement was poured and a veritable forest of piles and scaffolding was erected before any of the permanent work could be done. Practically the whole of the dome was built in this wooden form before work could be commenced and this primary work has been done, the concrete mixture filled in and most of the temporary construction work torn down within the past three months so that the dome now stands as it is seen in the latest picture of the group.

Underneath the dome, there will be a vast chamber in which will be gathered the now scattered library of the schools. This will be known as the Central Library. Technology has the finest engineering library in the world. At present it is widely scattered in the various departments, but when the change is made to the new building all will come together under the one roof, the dome. Here the libraries of the different departments will be classified and installed in separate parts of the chamber according to the part of the building the department is in. Thus the mining library will be on the side of the room into which the entrance from the building on that subject leads, etc. To the right of the library will be the administration section of the building, the rooms of the bursar and registrar, the business and other offices. These, however, will be on the first floor. Physics will have the wing to the left of the library. In the front along the esplanade

the buildings which will surround the minor court of the group will be given over to the general studies and biology.

Besides expanding into adjacent room space the planning permits growth in much the same way as the sections of modern library bookcases, and the immediate constructions will afford the opportunity of erecting extensions or wings so that any department may expand into a building suited to its needs. In this way there need never be a time when floor space will be lacking.

Beneath the Central Library on the lower floor of the Administration Building will be a lecture room seating about 500 students. This will not be assigned any individual class or department, but will be used for general lectures and addresses. In another part of the buildings an auditorium is being constructed.

Drawings by Mr. Despradelle

A large collection of drawings and designs by the late Désiré Despradelle has been presented by Mme. Despradelle to the department of architecture of the Massachusetts Institute of Technology. The works were those executed both in Europe and in this country from a period antedating Professor Despradelle's admission to the *École des Beaux Arts* up to the time of his death. To the students of architecture this collection will be of very great educational value.

The portrait bust of Mr. Despradelle by Denys Puech, now at the Museum of Fine Arts, is regarded as the beginning of a memorial, the precise form of which is as yet undecided. The bust will be placed temporarily in the corridor of the Rogers Building when in the spring the department of architecture is removed from Pierce to the Rogers Building.

The large increase in sustaining members has greatly enlarged the usefulness of the Alumni Association. The coming Reunion would not have been attempted on so large a scale but for the preparation these funds permitted.

Fine showing for Tech

About the middle of April the President made public the names of about 250 men who had been appointed by him a committee on Industrial Preparedness for the Naval Consulting Board of the United States. Five committeemen were appointed from each state. These men are to make a complete survey of American industry so that it can be mobilized in time of war. Each of these 250 men has been appointed by Secretary of the Navy Daniels as associate member of the Naval Consulting Board. Under them will work more than 30,000 trained members of the National Engineering Society. Members of the committee have been selected by their own professional associates as having the qualities of efficiency and integrity.

Of the 250 men on the committee, 21 are Tech men, or about eight per cent. Following is a list by states:

Delaware: Coleman du Pont, '84, 120 Broadway, New York City.

Georgia: F. N. Smalley, '96, chief chemist Southern Cotton Oil Company, Savannah.

Illinois: Frederick K. Copeland, '76, president Sullivan Machinery Company, 122 South Michigan Avenue, Chicago; Dr. W. F. M. Goss, '79, dean of College of Engineering, University of Illinois, Urbana.

Kansas: H. G. Hixon, '05, metallurgist of Prime Western Spelter Company, Iola; A. A. Potter, '03, dean of Division of Engineering, Kansas State Agricultural College, Manhattan.

Kentucky: Frank D. Rash, '01, vice-president and general manager of St. Bernard Mining Company, Earlington.

Maine: R. H. Richards, '68, professor of mining engineering, Massachusetts Institute of Technology, Boston, Mass; J. S. Hyde, '89, president of Bath Iron Works, Bath.

Massachusetts: A. D. Little, '85, president of A. D. Little, Inc., 93 Broad Street, Boston.

Michigan: H. T. Graber, '03, chief chemist of Digestive Ferments Company, Detroit.

Nebraska: Elliot Holbrook, '74, Southern Pacific Company, 1011 Union Pacific Building, Omaha; H. A. Holdredge, '95, general manager Omaha Elevated Light and Power Company, Omaha.

New Hampshire: Thomas W. Fry, '85, secretary Sullivan Machinery Company, Claremont; Hugh K. Moore, '97, chief chemist Research Laboratory, Berlin Mills Company, Berlin.

New Jersey: Farley Osgood, '97, assistant general manager, Public Service Electric Company, 759 Broad Street, Newark.

Ohio: Charles S. Robinson, '84, second vice-president Youngstown Sheet and Tube Company, Youngstown.

Rhode Island: Walter M. Saunders, '88, Saunders & Franklin, 184 Whittier Avenue, Providence.

Vermont: C. B. Hollis, '02, general superintendent Eastern Talc Company, Randolph; G. H. Burrows, '14, professor of chemistry of University of Vermont, Burlington.

Virginia: Walter S. Rodman, '09, professor electrical engineering of University of Virginia, University.

New Members of the Corporation

At the meeting of the Corporation of the Massachusetts Institute of Technology, March 8, five new members were elected. The life members are Pierre S. duPont, '90, of Wilmington, Del., and Frank A. Vanderlip of New York City.

The new term members are Harry J. Carlson, '92, of Newton Centre, Henry J. Horn, '88, of Brookline and Samuel J. Mixter, M. D., '75, of Boston. The vacancies in the life members of the Corporation, which have thus been filled, are those caused by the death of James P. Tolman, '68, and the resignation of Robert S. Peabody, '68, while the term members retiring are Henry Howard, '86, Henry A. Morss, '93, and Arthur Winslow, '81.

Help your class make a good showing in the "Roll of Honor" by doing your bit for the Fund.

FIFTIETH MEETING OF COUNCIL

Past Presidents review the history of the Alumni Association and make suggestions for the future

The meeting of the Alumni Council held at the University Club April 24, being the fiftieth meeting of the Council, was devoted principally to a discussion of its history by the different alumni presidents, most of whom were present at the meeting. Preliminary to this, however, Mr. Litchfield, '85, secretary of the Reunion Committee, and Mr. Fay, '93, spoke of some new features of the Reunion.

Owing to the illness of President Stone, '88, Vice-President Rollins, '78, occupied the chair.

Mr. Walter B. Snow, '82, who was president when the new constitution, which created the Alumni Council as the central governing body was constructed, gave a history of the reorganization of the Alumni Association and the formation of the Council. Previous to the change practically the only business done by the association was conducted during the half hour that preceded the annual meeting. Realizing the ineffective organization of the Alumni Association the secretaries of classes had organized themselves into an association during the late 90's. This latter organization was created with great difficulty. At that time only about three-quarters of the classes had secretaries and their duties were largely perfunctory.

The class secretaries engineered the first reunion, successfully started and conducted the TECHNOLOGY REVIEW, and inaugurated the pop concerts and ran them for a number of years. The Association of Class Secretaries became a forum for free discussion and as such was extremely useful to the alumni and the Institute. An analysis of the situation resulted in the conception of a council, where discussion should be free, grafted onto the Alumni Association. This matter was discussed by the Association of Class Secretaries and finally a special

committee of the Alumni Association was created consisting of A. Farwell Bemis, '93, A. G. Robbins, '86, Howard L. Coburn, '87, the speaker and the secretary, Walter Humphreys, '97, to study the situation and present a scheme of reorganization. It was thought that perhaps it would be a good plan to work in other members of the classes as representatives on the Council rather than to specify that the Council should consist of secretaries of classes only. The Association of Class Secretaries still lives but devotes itself principally to the study of matters relating to the interests of the classes directly.

At the second Technology reunion the Alumni Association and the Association of Class Secretaries lent their combined aid in pushing the publication of the *Register of Former Students* which has been such an important factor in bringing Tech men together.

During Mr. Snow's régime there were a number of changes which had to be made in the constitution, one being placing associate members on the same basis as graduates, and another the creation of a nominating committee.

Edwin S. Webster, '88, who was president in 1909, was unable to be present at the meeting, and Secretary Humphreys read notes covering the history of that time.

The first meeting of the Council was held May 12, 1909. Dr. Noyes, '86, who was Acting-President of the Institute, made the following suggestions as topics for consideration: A camp for the Summer School of Surveying, the establishment of an option in refrigerating and gas engineering in the department of mechanical engineering, consideration of plans to assist in forming new local alumni associations, to secure speakers for the annual meetings of the associations and to keep the secretaries of these

associations in touch with the developments and needs of the Institute.

Henry Howard, '89, proposed that the Institute give particular attention to aeronautics.

In January, 1909, the Association of Class Secretaries turned the TECHNOLOGY REVIEW over to the Alumni Association.

A. Farwell Bemis, '93, who was president in 1910, spoke of that year as the year of the three "S's"—the site, summer school and state aid.

At the second meeting of the Council, President Maclaurin stated that the question of the new site was a very pressing one and asked the assistance of the Council.

The Summer School of Civil Engineering was another enterprise that was started during that year, and the organization of the campaign for aid from the State of Massachusetts was made at that time under the able leadership of Chairman Rollins.

Prior to 1910 the nominating committee was self-perpetuating. The present plan of rotation was adopted during that year.

The REVIEW was changed from a quarterly to a monthly during 1910, and an extensive trip of Dr. Maclaurin was engineered by the alumni.

The question of a department for the teaching of aeronautics at the Institute was discussed by a committee of the Council and during that year the members of the School of Mechanic Arts were voted into the Alumni Association.

Mr. Bemis continuing said that he thought the Council should be careful to avoid drifting into a dining club, although there was not much danger of it at the present time. Something definite ought to be taken up and carried forward every year and committees appointed to carry the work to completion. The enterprise of the Technology Club of New York in giving noon luncheon talks suggested that the Alumni Council might undertake some similar program with great benefit. It was suggested that they might hold a number of gatherings to which all Alumni Association members were free to come. The great body of

Tech men were interested in the work of the Council and would be glad to attend some of these smoke-talks organized by that body.

Dr. Noyes, who was president in 1911, spoke of the completion of the *Register of Former Students* which occurred during his time, the change in the constitution admitting non-graduates on the same basis as graduates which was proposed during that year, and the prosecution of the state aid campaign to a successful issue. The Congress of Technology, which occurred during his term, was a very successful event and it was principally engineered by the alumni. A number of new sites were discussed at that time, and the Summer School of Civil Engineering finally became an accomplished fact through a gift of a member of the Alumni Council.

James W. Rollins, '78, who was president in 1912, told of the great satisfaction he had in being brought back into touch with the Institute by being made president of the association. Then he said that his success in the state aid campaign was due to the fact that he got some Technology politicians about him—Eugene C. Hultman, '95, F. T. Miller, '95, and Dr. Tyler, '84.

During his term a committee on business engineering was formed and made a very complete report which was forwarded to the Corporation, met with favor and was promptly adopted. The question of student housing was also an important topic during his administration. A number of professors were invited to come to the Council meetings and tell the members about the work of their departments. It was during that time that a suggestion came that the annual banquet of the association be held in New York. This was accepted and the annual meeting was held there at the time of the meeting of the Technology Clubs Associated.

F. H. Fay, '93, president in 1913, said that by that time the Council had settled down to a steady gait. It had held regular meetings prior to 1913 as follows: two meetings in 1909, six in 1910, five in 1911, seven in 1912, and ten in

1913; two of these latter were special meetings. During that year a definite program was outlined early in the year and pretty well followed.

W. W. Bosworth, '89, was selected as architect for the New Technology buildings, undergraduates' night was inaugurated, when the representatives of the principal student activities described their work to the Council. Three very important committees reported in 1913: the Committee on Student Housing, the Committee on Walker Memorial, and the Committee on Engineering Administration.

The report of the Student Housing Committee was an exhaustive study; it outlined the erection and the conduct of dormitories, going so fully into the matter that the report has become a classic.

The Walker Memorial Committee collected the greatest amount of information on student social and athletic centers, which was used to great advantage in laying out the plans of the Walker Memorial recently accepted.

It was during this year that the Committee on Engineering Administration, under the chairmanship of Jasper Whiting, '89, made its report, which was forwarded to the Corporation. The alumni here took a very important step in helping to form the educational policy of the Institute.

During 1913 a class of sustaining members was created, and it was due to the generosity of these men that many new enterprises were undertaken by the Alumni Association.

It was during the fall of 1913 that the agreement between Harvard and Technology was suggested, and the day following the formulation of these plans President Maclaurin took into confidence the president of the Alumni Association and the coming president, in order that he might get suggestions. Afterward the agreement was submitted to the five past presidents, it being the wish of Dr. Maclaurin to take no steps that were not in accordance with the approval of the alumni representatives. Some changes were suggested by them and adopted. On January 7, 1914, at the

completion of Mr. Fay's term of office, Dr. Maclaurin laid the whole plan before the Council before it was publicly announced.

Jasper Whiting, '89, who was president in 1914, in recounting the history of his term of office, spoke of the appointment of salad orators at the Council meetings and the creation of the office of field manager. He thought that reminiscences such as we have been having was fine, but instead of looking back over the last fifty meetings we should look forward to the next fifty and see what is to be accomplished. The Alumni Association has been of assistance to the Institute, the undergraduates and to the outside community, and in his opinion it was time for us to help each other. Our alumni are scattered all over the world. There are frequently demands for men of ability having specialized experience. It was Mr. Whiting's opinion that we should study out some plan that would place us in a position to secure men to fill such positions. The matter of the employment of the younger men is well taken care of at the Institute, but there is no means of bringing our more experienced alumni into connection with positions of greater responsibility and emolument.

He regretted that some committees appointed by the association had not held meetings.

Henry J. Horn, '88, who was president in 1915, was unavoidably absent in Chicago.

President Maclaurin who was called upon said that he had been greatly impressed by the activity of the Alumni Council. He had never known any alumni body that had regular meetings and devoted itself so seriously to the discussion of matters of similar importance. It is a mistake to think that Tech spirit is a different thing from that of other institutions. Whatever apparent difference there is, is in type rather than in degree. Technology alumni have always shown a determination to see things through; scarcely anything of importance in connection with the Institute has not been organized or carried on by this

body. He appreciated heartily what the Council had done to help him during his seven years of incumbency.

He said that some things suggested by the Council had not been actively pursued by the Corporation. This would explain inactivity in some directions. He hoped that in the future the activities in the Alumni Association would not have to be directed so much to the raising of money as in the past.

The great problem before the Institute today, he said, was that of broadening it. He thought that it was a little narrow, was a little too proud of itself. Technology in the future, more than in the past, is to be a national institution with a national and international outlook.

During the meeting an informal nominating committee, appointed by the President in accordance with the vote at the last Council meeting, reported through its chairman, Carl Gram, '09, which report was accepted.

The following alumni advisers for undergraduate activities were appointed:

Athletics: Allan W. Rowe, '01, until 1920 (eligible for re-election); Thomas H. Huff, '15, until 1919.

Finance Committee: Jasper Whiting, '89, until 1919.

Musical Clubs: A. L. Gardner, '08, until 1919.

Tech Show: R. E. Rogers (M. I. T. English Dept.), Harvard '09, until 1919.

The Tech: William Roger Greeley, '02, until 1919.

Fraternities in Tech Dormitories

President Maclaurin of the Massachusetts Institute of Technology announces the result of the first assignment of houses for the fraternities in the dormitory under construction in Cambridge. It will be remembered that a few months ago the plans were shown of the dormitory which had been made possible through the gift for the purpose of a sufficient sum. Ground has been broken for the building and the foundations are well along. It will be ready for occupancy when the Institute begins its work next fall in its

new buildings. The dormitory is L-shaped, one end running towards the Esplanade and the other towards the completed educational structures. The building is planned for seven houses, five of which will be regular student apartments grouped about a stairway, while the ones at the ends were set aside for fraternities. Applications were made for these by eight of the societies and the selection was made by lot. The first name to be drawn was that of the Delta Kappa Epsilon, and this fraternity selected the building next the Esplanade. The second choice was Delta Tau Delta, which took the other end of the structure, near the restaurant, gymnasium and athletic field.

The Technology chapter of the Delta Kappa Epsilon is the Sigma Tau and its house at present is 215 Newbury street, while the other fraternity is the Beta Nu chapter with its present home at 234 Newbury street.

The fraternity houses are a little different in plan from the regular dormitory houses, in that they have a living room and kitchen and dining facilities. The students in general, not in the fraternity houses, will take their meals at the restaurant or in such other place as they may find convenient, while the new Walker Memorial will provide the general meeting place for them.

The fact that eight fraternities applied for the houses and that the dormitory under way will accommodate about two hundred students, emphasizes the fact that there will be needed something like four times the capacity now planned. The problem has been one that President Maclaurin has left for consideration until the all-important questions of educational structures and their equipment were well in hand. He now sees the way out of these matters and will have the educational plant in good order when the school opens in the fall. The Walker Memorial corner stone will be laid in June and it is expected to rush part of it to a finish so that it can be used for students in the fall. The question of endowment and more dormitories will then remain.

More Class Publications

Since the last number of the *REVIEW* was issued four more class publications have appeared. The second issue of the *Mitten* is one of the brightest attempts of the kind that has ever been put out by Tech men. It is full of clever material as will be seen from some of the quotations in the current number of the *REVIEW*.

The four classes, '81, '82, '83 and '84 started out with what was originally called the *Tech Quad*; '81 issuing the first number and '82 the second, and now the third number, edited by the class of '83, with Harvey S. Chase at the bellows, is called the *Hand Organ*. Said Chase has come out of his hibernation, and to use a vulgarism, has absolutely put it all over the erstwhile traducers of the class of '83. It is a very clever number, well put up and full of bright material. There is an ominous stillness in the atmosphere, however, when one remembers that the class of '84 has the last crack at the editorial typewriter. This ominousness becomes more ominous when one notices the settled grin that dominates Tyler's features as he flits from place to place about the Institute. Watch out for the *Hand Organ* or the *Quad* or something else which '84 will publish this month.

The fifth number of the *Ninety Tea Kettle* has also been received. This is filled with interesting news in regard to the Reunion, giving the class all the particulars of their special outing and of the events of the Reunion.

The '85 *Hustler*, giving news of the class, with a directory of its members, has also appeared.

Death of Professor Louis Duncan

Louis Duncan, past president of the American Institute of Electrical Engineers, a member of the firm of Duncan, Young & Co., consulting engineers of New York City, died at his home in Pelham Manor, N. Y., on February 13, at 54 years of age. Dr. Duncan was born in Washington, D. C. He was graduated from Annapolis in 1880 and three

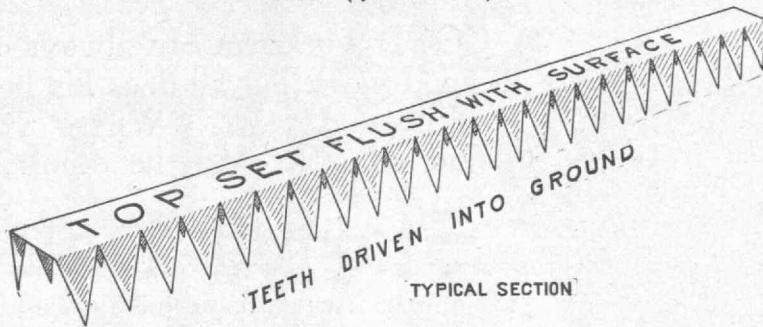
years later was sent by the United States Government to Johns Hopkins University to take a special course in electricity and physics. He received the degree of doctor of philosophy from Johns Hopkins in 1887 and resigned at that time from the navy to become a member of the Johns Hopkins University faculty. He established the course of electrical engineering of that university and was head of the department of electrical engineering until 1898. During that time he became associated with Frank J. Sprague and Cary T. Hutchinson and acted as consulting engineer on the electrification of the Baltimore tunnels of the Baltimore & Ohio Railroad and the equipment of the Third avenue elevated-railroad system of New York City, later being consulting engineer also of the New York City Rapid Transit Commission. During the Spanish-American War he became major of the First Volunteer Engineers. In 1889 Dr. Duncan inaugurated the electrical engineering course at the Massachusetts Institute of Technology and was head of the department of electrical engineering from 1902-1904. He was twice elected president of the American Institute of Electrical Engineers (1895-1897). Dr. Duncan was a writer of numerous articles on engineering subjects contributed to the technical press of this country.

Dinner in Birmingham

The Southeastern Technology Association of the Massachusetts Institute of Technology held its first April luncheon yesterday at noon at the Hotel Hillman. The luncheon was well attended and much enthusiasm was manifested. Details of the new buildings were discussed and a report made on the plans for the June Reunion in Boston. The next luncheon will be held Wednesday, April 19. Among those present yesterday were the following: W. E. Melton, Paul Chalifoux, W. E. Mitchell, H. H. Beers, S. A. Fletcher, Robert E. Stobert, O. G. Thurlow, A. Mohan, C. H. Boilston and F. C. Weiss. F. P. Cummings and G. W. Swathoff were guests.—*Birmingham Age-Herald*, April 6.

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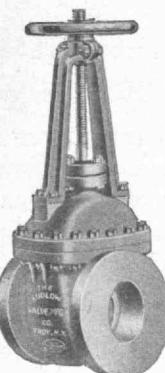
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